

REMARKS

Claim 13 has been amended to include the limitations recited in dependent claim 14, which has been canceled. Claim 15, previously dependent from canceled claim 14, has been amended to depend from amended claim 13. Applicant submits that the amendment therefore raises no new issues and respectfully requests that it be entered in order to place the claims in better form for consideration on appeal. Upon entry of the amendment, claims 1-13 and 15-16 will be pending in the application. Reconsideration is respectfully requested in light of the following remarks.

Provisional Double Patenting Rejection:

The Office Action provisionally rejected claims 1-16 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-16 of co-pending application number 10/061,792. Applicant will address this rejection should it become non-provisional.

Section 103(a) Rejection:

The Office Action rejected claims 1-8 and 10-12 under 35 U.S.C. § 103(a) as being unpatentable over Gunther et al. (U.S. Patent 5,781,783) (hereinafter “Gunther”) in view of Bartley (U.S. Patent 6,219,796) (hereinafter, “Bartley”), claim 9 as being unpatentable over Gunther and Bartley as applied to claim 1 above, and further in view of Pappert (U.S. Patent 6,380,760) (hereinafter, “Pappert”), claim 13 as being unpatentable over Gunther in view of Suzuki (U.S. Patent 5,987,616) (hereinafter, “Suzuki”), claims 14 and 15 as being unpatentable over Gunther and Suzuki as applied to claim 13 above, and further in view of Bartley, and claim 16 as being unpatentable over Gunther in view of Suzuki and Bartley. Applicant traverses these rejections and submits that pending claims 1-13 and 15-16 are patentably distinguishable over the cited art as set forth in greater detail below.

The cited art fails to teach or suggest, either separately or in combination, all of the features of Applicant's claim 1. Specifically, the cited art fails to teach or suggest a plurality of activity detector and clock control units coupled to a plurality of functional units, wherein each activity detector and clock control unit is associated with a different one of the functional units and configured to predict when its associated functional unit will be inactive for a threshold amount of time as well as to shut off a clock to an associated functional unit in response to such a prediction of inactivity.

The Examiner relies on Gunther to teach a plurality of activity detector and clock control units but acknowledges that Gunther does not teach or suggest that an activity detector unit predicts that a functional unit will be inactive for a threshold amount of time, as expressly recited in claim 1. The Examiner relies on Bartley to teach this limitation. However, Bartley is entirely directed to a method of optimizing a computer program for reduced power consumption through use of a compiler or manual code analysis (Abstract and col. 7, lines 11-61). Specifically, Bartley discloses that a compiler or a programmer analyzes program code segments and inserts power-modification instructions into the code segments on the basis of the analysis (col. 7, lines 31-61). In the method of Bartley, such analysis and code modification must necessarily occur before the code is ever executed by a target processor; otherwise there exists no opportunity to detect and insert power-modification instructions that may result in power reduction through their execution.

Clearly, a compiler-driven or manual analysis of code and resultant insertion of power-modification instructions prior to execution of the code, irrespective of the technique employed in the analysis, is not in any way equivalent to or even suggestive of an activity detector and clock control unit coupled to a functional unit within an integrated device or microprocessor that is configured to predict when its associated functional unit will be inactive for a threshold amount of time as well as to shut off a clock to an associated functional unit in response to such a prediction of inactivity. No aspect of the target processor of Bartley performs any prediction of the activity status of its functional units. In fact, by focusing on optimizing code for reduced power

consumption during the compilation process and inserting explicit power-related instructions into the compiled code, Bartley actually teaches away from the hardware-based activity detector and clock control unit recited in claim 1.

A hypothetical combination of Gunther and Bartley would not lead one skilled in the art to the subject matter recited in claim 1. Rather, the combination would suggest execution of the software method of Bartley on the processor of Gunther to insert power-modification instructions into code subsequently executable on the processor of Gunther. However, the features of the activity detector and clock control unit recited in claim 1 and originally absent from Gunther, as acknowledged by the Examiner, would still be lacking in the resultant combination. Applicant also notes that Suzuki and Pappert fail to teach or suggest those limitations of claim 1 that are absent from Gunther.

A similar argument applies to claims 10, 13 and 16, which include limitations similar to those of claim 1. For at least the foregoing reasons, Applicant submits that claims 1, 10, 13 and 16 are patentably distinguishable over the cited art, as are those claims depending from these independent claims.

CONCLUSION

Applicant submits the application is in condition for allowance, and notice to that effect is respectfully requested.

If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5500-68500/RCK.

Also enclosed herewith are the following items:

- Return Receipt Postcard
- Petition for Extension of Time
- Notice of Change of Address
- Other:

Respectfully submitted,



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